

REMARKS

Claims 1-40 are currently pending in the above-identified application. Claims 1 and 36 have been amended. Support for these amendments is found throughout the specification including, for example, at least at FIGS. 8 and 9, and paragraph 0059-0068. No new matter is added by these amendments. Claim 37 has been canceled without disclaimer or prejudice to Applicant's right to pursue the subject matter of the claims in a related application.

Information Disclosure Statement

The Examiner has objected to the IDS filed 9/13/2004 as not providing legible copies of all non-U.S. patents on the submitted CD-ROM. The IDS including legible paper copies of the references is being re-submitted concurrently with the present response.

Double Patenting Rejections

Claims 8-10 are rejected under 35 U.S.C. §101 double patenting as claiming the same invention as that of claims 1-3 of prior U.S. Patent No. 6,767,208. This rejection is rendered moot in view of amended claims 1 and 36. Accordingly, withdrawal of the rejection of claims 8-10 under 35 U.S.C. §101 is respectfully requested.

Claims 1-7, 11-40 are rejected on the ground of nonstatutory double patenting over claims 1-28 of U.S. Patent No. 6,767,208. A terminal disclaimer is being filed with the present response to overcome the rejection. Accordingly, withdrawal of the rejection of claims 1-7, and 11-40 under nonstatutory double patenting is respectfully requested.

Rejections under 35 U.S.C. §102

Claims 36-39 are rejected under 35 U.S.C. §102(b) as being anticipated by Little *et al.* (U.S. Patent No. 5,119,408).

Although Applicant respectfully disagrees with the rejections and does not acquiesce to any reasoning provided by the Examiner, claim 36 has been amended in order to

clarify certain differences between the present invention and the cited reference, and to further expedite prosecution of the present case. As amended, claim 36 is directed to an apparatus to create a digital model of a patient's teeth, comprising an X-ray radiation source; a scintillator to receive the radiation from the X-ray radiation source; a radiation detector coupled to the scintillator; a rotatable table positioned between the X-ray radiation source and the scintillator, the table being adapted to support an impression of the patient's teeth; and a computer coupled to the detector, the computer comprising a computer-readable medium having instructions that, if executed by the computer, will cause the apparatus to: scan the impression using the X-ray radiation source as to generate scan data comprising an image of at least a portion of the impression; and generate a positive digital model of the patient's teeth with the X-ray scan data, the generating comprising digitally reversing the X-ray scan data to make positive data.

Applicant respectfully submits that the cited reference fails to teach each and every element of the presently claimed invention, thereby precluding a finding of anticipation.

Little teaches methods and apparatus for inspecting a component having dimensions larger than a fan beam angle of an X-ray inspection system. However, the teachings of Little appear to focus on x-ray inspection of a component and construction of a cross-section image of the component itself. Little fails to teach scanning an impression of a patient's teeth as to generate scan data comprising an image of at least a portion of the impression, and generating a positive digital model of the patient's teeth with the scan data, the generating comprising digitally reversing the scan data to make positive data. Thus, Little cannot anticipate claim 36 and those claims dependent thereon because Little fails to teach each and ever element of the presently claimed invention.

Accordingly, Applicant respectfully requests withdrawal of the rejections of claims 36-39 under 35 U.S.C. §102(b).

Claims 36-39 are rejected under 35 U.S.C. §102(b) as being anticipated by McCroskey *et al.* (U.S. Patent No. 5,023,895).

Although Applicant respectfully disagrees with the rejections and does not acquiesce to any reasoning provided by the Examiner, claim 36 has been amended in order to clarify certain differences between the present invention and the cited reference, and to further expedite prosecution of the present case. Applicant respectfully submits that the cited reference fails to teach each and every element of the presently claimed invention, thereby precluding a finding of anticipation.

McCroskey teaches an industrial CT system for three dimensional imaging of an object. According to McCroskey, an object to be imaged is positioned on a turntable interposed between a radiation source and a detector array; data from two dimensional views are stored as the object is rotated, and the data is used to construct a transparent three dimensional image of the object. However, McCroskey fails to teach scanning an impression of a patient's teeth as to generate scan data comprising an image of at least a portion of the impression, and generating a positive digital model of the patient's teeth with the X-ray scan data, the generating comprising digitally reversing the X-ray scan data to make positive data. Thus, McCroskey cannot anticipate claim 36 and those claims dependent thereon because McCroskey fails to teach each and every element of the presently claimed invention.

Accordingly, Applicant respectfully requests withdrawal of the rejections of claims 36-39 under 35 U.S.C. §102(b).

Rejections under 35 U.S.C. §103

Claims 1-7, 11-40 are rejected under 35 U.S.C. §103(a) as being unpatentable over Hultgren (U.S. Patent No. 6,217,334) in view of McCroskey *et al.*

Although Applicant respectfully disagrees with the rejections and does not acquiesce to any reasoning provided by the Examiner, claims 1 and 36 have been amended in order to clarify certain differences between the present invention and the cited references, and to further expedite prosecution of the present case. Applicant respectfully submits that the cited references, either alone or in combination, fail to teach or suggest each and every element of the

presently claimed invention, thereby precluding *prima facie* obviousness. See, e.g., MPEP §2141-2143.

No reasonable combination of Hultgren and McCroskey would teach or suggest the presently claimed invention. Hultgren teaches a dental and soft tissue scanning method and system which utilizes fast laser line scanning techniques of negative image impressions. Rather than scanning an impression using an X-ray source, as defined by current claim 1, Hultgren focuses on scanning an impression with a laser device.

In contrast to Hultgren, McCroskey does not even deal with creating negative image impressions or laser scanning, but instead teaches an industrial CT system for three dimensional imaging (e.g., using an X-ray source) of an object, by directly using the data to construct a transparent three dimensional image of the scanned object itself. Each of these two very different systems of Hultgren and McCroskey includes components tailored for its intended purpose, and there is no teaching or suggestion that would motivate one of ordinary skill in the art to seek to modify the system of Hultgren by replacing the laser scanner with the X-ray generator source of McCroskey, and there are certainly no teachings in the cited references as to how such a modification would even be accomplished.

Even if, for arguments sake only, one were to attempt to combine the references by replacing the laser device scanner of Hultgren with the X-ray source of McCroskey, the combination would still fail to teach the claimed invention and would not appear to be easily made operable to generate a positive digital model of the patient's teeth with X-ray scan data from X-ray scanning of an impression including by digitally reversing X-ray scan data. For example, the proposed combination would require further and substantial reconstruction of components of the Hultgren system including, for example, reconstruction/redesign of the scanner system and/or associated components, configuration, programming, and the like (see, e.g., Hultgren col. 5, lines 15-18, and 40-44). Thus, even if combined (even though there appears to be no motivation for doing so), the references would still fail to teach scanning an impression using an X-ray source as to generate scan data comprising an image of at least a

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portion of the impression and generating a positive digital model of the patient's teeth with the scan data, the generating comprising digitally reversing the scan data to make positive data.

Accordingly, for the reasons set forth above, Applicant respectfully requests the withdrawal of the rejections of claims 1-7, 11-40 under 35 U.S.C. §103(a).

CONCLUSION

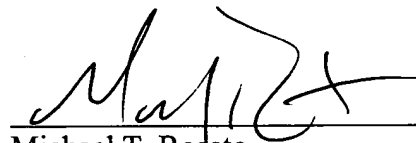
In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 206-467-9600.

Respectfully submitted,

Date: _____

7/3/06



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